Thesis Project Portfolio

Library Resource Promotion via Browser Extension

(Technical Report)

**Checking Out With Caution: Improving Library Programs to Teach Evaluation and
Consumption of Online Information**

(STS Research Paper)

An Undergraduate Thesis

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Sociotechnical Synthesis

The work presented in this binder is linked by the theme of the societal role of libraries and how that role has developed amidst the growing importance of digital information technology. The University of Virginia (UVA) Library clients who requested the technical Capstone project presented herein recognized a need to make library resources more conveniently visible to patrons -- both faculty and students -- who might typically overlook the library's growing breadth of digital offerings. From this problem presentation and the resulting software product designed to address it, I pursued my sociotechnical research on the subject of the perceived cultural importance of libraries to their communities and how they can effectively engage with communities in order to address social issues. As all technical work can be enriched by considering its social impacts, the progression of this STS research was instrumental in informing an appreciation for the sustained modern value of libraries as educational resources.

The technical portion of this binder describes the development of the UVA Library Google Chrome Browser Extension, a web browser plugin that presents users with suggested items and services from the UVA Library based on the user's online browsing activity. Following an easy installation and minimal configuration, users of the extension who search for or look at webpages that present products or services that are available from the library receive links to those offerings so that library patrons may avoid paying premiums to other vendors. My Capstone group designed and developed this software product to be as unobtrusive and convenient for users as possible in order to maximize user retention while minimizing internet communications with external servers for purposes of security and privacy.

In my STS research, I narrowed in on the subject of digital information literacy, how current US educational efforts to teach those skills are insufficient, and the potential for libraries to help correct that issue. I collected literature that established the widespread inabilities of consumers of online information to distinguish between factual content and biased or fraudulent media, as well as demonstrating the recognition of this societal weakness by information science experts. In examining remedial actions to address poor information literacy, I discuss various case studies of attempts to implement library-run programs and courses to teach general skills related to critical informational analysis, which saw mixed results. Combining this research with a framework of Actor-Network Theory focused on the multiple levels of networks of global and local actors associated with libraries, I assert the importance of systematic investment into library programs in order to inform a more literate society.

Pursuing this STS research enriched the concurrent development of the UVA Library Extension by informing the usefulness of additional features that elevated the software from a minimum viable product that simply advertised library books into a means of engaging students with unique, overlooked, and educationally significant offerings. Later product development focused on incorporating and curating suggestions for nontraditional services such as library courses teaching use of specialized research database software. In turn, iterative feedback from Capstone clients related to the technical project provided valuable library-centric viewpoints on how students perceive different services, informing areas of STS research to look into further. The simultaneous progression of both of these projects improved each of them by providing richer understandings of multiple facets of the sociotechnical role of libraries in our increasingly digital society.